

TROPHIC CLASSIFICATION OF N.H. LAKES AND PONDS

NAME Simpson Pond TOWN Windham CO Rockingham RIVER BASIN Merrimack

I. POTENTIAL FOR NUTRIENT ENRICHMENT

Latitude: 42°46'N

Longitude: 71°18'W

A. NATURAL PHYSICAL FACTORS

1. Area (ha) 15.2
2. Max. depth (m) 1.5
3. Mean depth (m) 0.7
4. Elevation (ft) 153
5. Shore length (m) 2600
6. Volume (m³) 106,500
7. Volume/shore length 40
8. % Stratification 0%
9. Watershed area (ha) 3,006.6

10. Watershed area
Volume 282
11. Bottom slope 0.3
12. Shore config. 1.28
13. Flushing rate 135.8
14. Water renewal time 0.007
15. Drainage density -
16. % Watershed ponded -
17. Phos. retent. coeff. R 0.23

B. CULTURAL FACTORS

1. % Shore developed
2. Number nearshore homes
3. # nearshore homes/mile shore
4. Volume lake/# nearshore homes

5. Estimate of non-point Tot-P loading:

- a. Land Use
- b. Precipitation
- c. Subsurface disposal
- d. Other

II. INDICATORS OF TROPHIC CONDITION

(mg/l unless indicated otherwise)

A. Winter Data:

Date 9 March 1977

Weather Clear sunny and mild; light breeze

Depth(m)	<u>.5</u>	
Alkalinity	<u>5.0</u>	
PO ₄ -P	<u>.002</u>	
Total-P	<u>.045</u>	
NO ₂ +NO ₃ -N	<u>.19</u>	
Kjeld-N	<u>.92</u>	
Total-N	<u>1.11</u>	
Tot-N/Tot-P	<u>25</u>	
NO ₂ +NO ₃ -N/PO ₄ -P	<u>95</u>	

Bottom: Depth 1.1 m D.O. 11.1 % Sat. 78

% Organic matter sediment 31.1%

Dom. Phytopl. 1. Pennate spp. - 50%

2. Mougeotia - 35%

Dom. Zoopl. 1. Sparse - no dominants

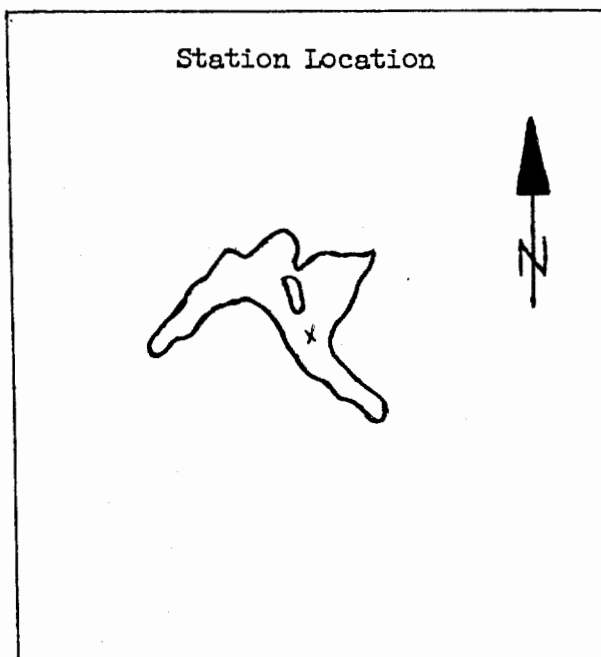
2.

B. Summer Data:

Date 13 July 1978

Weather Partly cloudy; little wind and hot
(27°C)

Depth (m)	1.5		
pH (units)	7.0		
Alkalinity	16.0		
PO ₄ -P	.002		
Total-P	.018		
NO ₂ +NO ₃ -N	<.05		
Kjeld-N	.44		
Total Residue	90		
Color (units)	65		
Turb. (NTU)	1.5		
Spec. Conduct. (μMhos/cm)	156		
Tot. Org. Carbon	8.5		
Chloride	30		
Mg	1.3		
Ca	8.8		
Na	20.0		
K	1.44		
[Mg+Ca] / [Na+K]	.47		
Tot-N/Tot-P	-		
NO ₂ +NO ₃ -N/PO ₄ -P	-		



Bottom: Depth 1.5 m D.O. 7.8 % Sat. 92

Epilimnetic alkalinity decrease -11.0

PO₄-P ratio: epi/hyp -

Total-P ratio: epi/hyp -

Secchi disk transparency (M) 1.9

% organic Matter sediment -

Vascular Plants Very abundant

Dom. Vasc. Plants: 1. Nymphaea
2. Juncus
3. Pontederia

Ash-Free Dry Weight -

Chlorophyll a 6.71 (mg/m³)

Tot. Zoopl. Cnts. 471 (cells/liter)

Dom. Phytopl. 1. Chrysosphaerella - 99%

2. -

Dom. Zoopl. 1. Polyarthra

2. Keratella } 25%

3. Nauplius larva }

TROPHIC CLASSIFICATION 1978 :

D.O. S.D. Vasc. Plants Chl a Total Class.

Classification Points:

-	2	4	1	7	Eutro.
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COMMENTS:

1. Weed-filled pond; very little open water.
2. Pond was not thermally stratified during the summer sampling trip.
3. A private pond.

FIELD DATA SHEET

WATER BODY Simpson Pond TOWN Windham By WSPCC

DATE COLLECTED July 13, 1978 WEATHER partly cloudy; 80°F; no wind

STATION	DEPTH (M)	TEMP. (°C)	*DISSOLVED OXYGEN	OXYGEN: % SATURATION			
Open water up from dam	1.5	24.5	7.8	92			
			* mg/L				

SECCHI DISK (M) 1.9

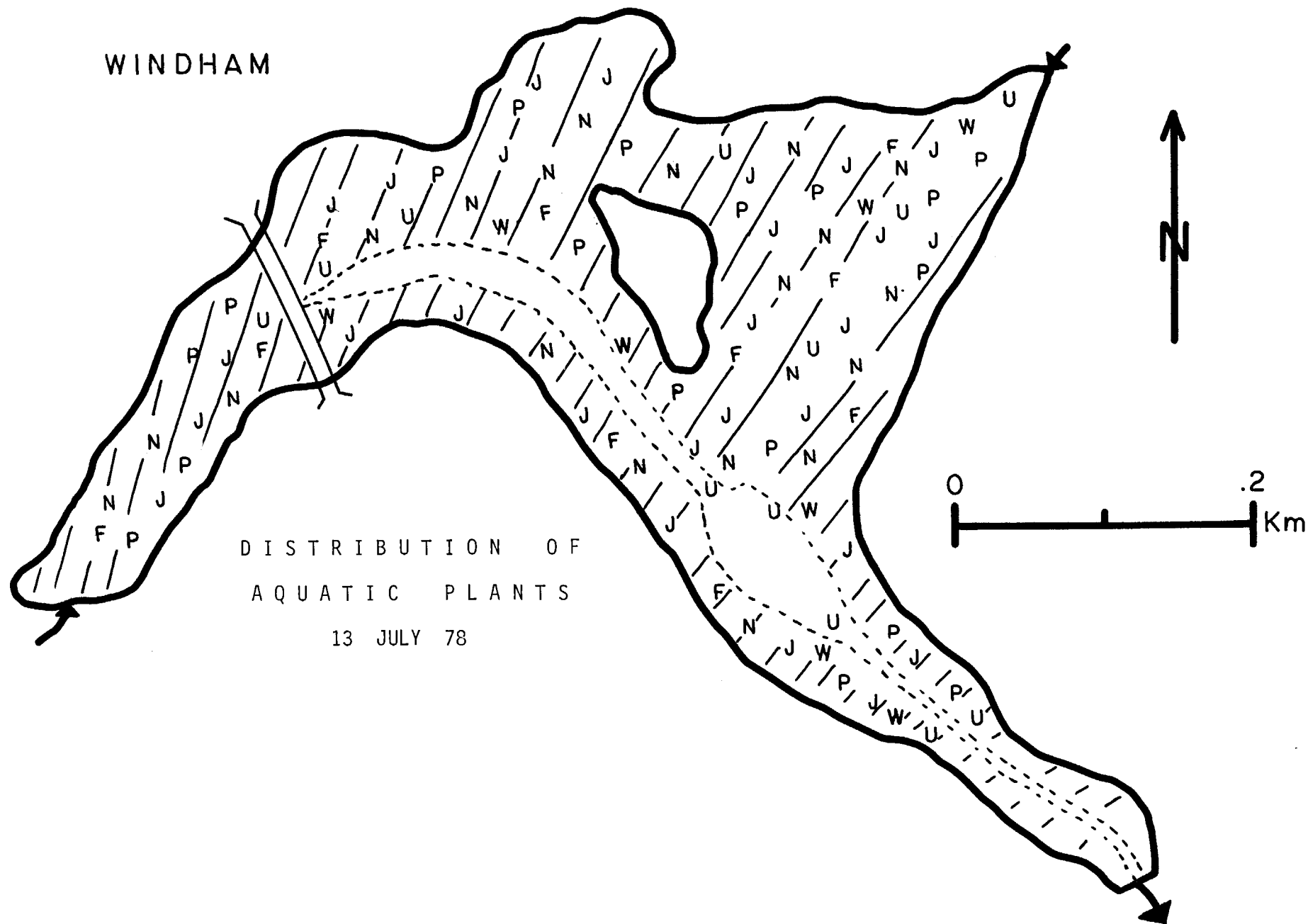
BOTTOM DEPTH (M) 2.0

TIME 1400 hrs.

COMMENTS: This pond had very little open water; it was mostly covered with vascular aquatic plants.

SIMPSON POND

WINDHAM



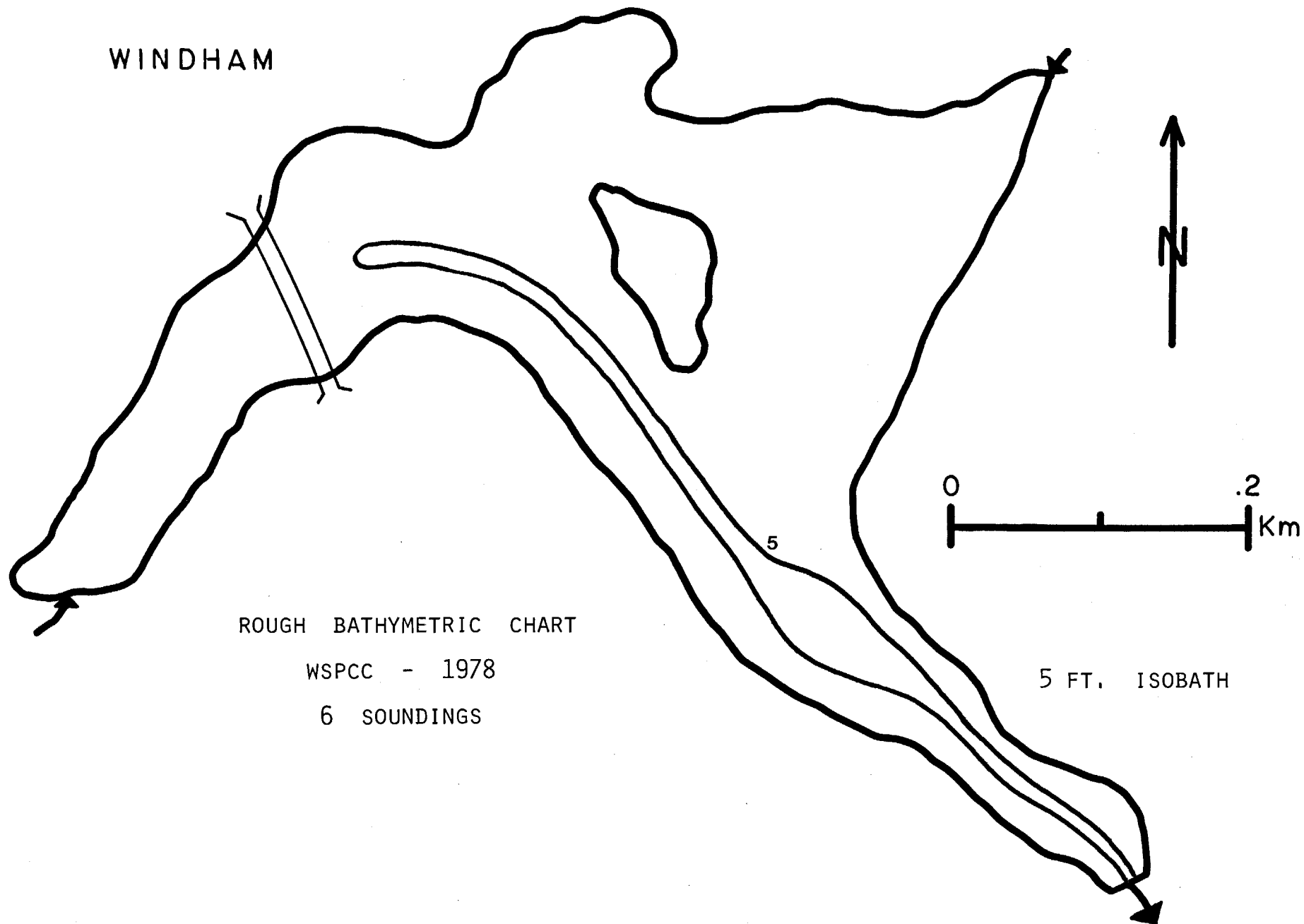
DISTRIBUTION OF
AQUATIC PLANTS

13 JULY 78

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SIMPSON POND

WINDHAM



ROUGH BATHYMETRIC CHART

WSPCC - 1978

6 SOUNDINGS

5 FT. ISOBATH

0 .2 Km

310